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Shinohara

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(54) **METHOD OF MANUFACTURING SEMICONDUCTOR DEVICE**

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(58) **Field of Classification Search**

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(57) **ABSTRACT**

Provided is a semiconductor device having improved performance. In a semiconductor substrate located in a memory cell region, a memory cell of a nonvolatile memory is formed while, in the semiconductor substrate located in a peripheral circuit region, a MISFET is formed. At this time, over the semiconductor substrate located in the memory cell region, a control gate electrode and a memory gate electrode each for the memory cell are formed first. Then, an insulating film is formed so as to cover the control gate electrode and the memory gate electrode. Subsequently, the upper surface of the insulating film is polished to be planarized. Thereafter, a conductive film for the gate electrode of the MISFET is formed and then patterned to form a gate electrode or a dummy gate electrode for the MISFET in the peripheral circuit region.

11 Claims, 86 Drawing Sheets

